

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A composition comprising desulfurized cracked-gasoline having an average octane number as determined by (RON+MON)/2 of at least about 81.35, wherein said desulfurized cracked-gasoline comprises about 15 to about 40 percent aromatics by weight based on the total weight of the desulfurized cracked-gasoline, and less than about 1 ppmw thiol compounds and less than about 1 ppmw tetrahydrothiophene compounds.

2. (Currently Amended) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline has a decrease in an average octane number loss, as determined by $\Delta(\text{RON}+\text{MON})/2$, of less than 3.5 when compared to the average octane number of the cracked-gasoline prior to desulfurization.

3. (Original) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises less than about 0.5 ppmw thiol compounds and less than about 0.5 ppmw tetrahydrothiophene compounds.

4. (Original) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises less than about 1 ppmw dihydrobenzothiophene compounds.

5. (Currently Amended) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline has a decrease in an average octane number loss, as determined by $\Delta(\text{RON}+\text{MON})/2$, of less than 3 when compared to the average octane number of the cracked-gasoline prior to desulfurization.

6. (Original) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises less than about 25 ppmw sulfur.

7. (Original) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises less than about 15 ppmw sulfur.

8. (New) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises less than about 5 ppmw sulfur.

9. (New) Composition in accordance with claim 1 wherein the sulfur content of said desulfurized cracked-gasoline consists essentially of thiophenes and benzothiophenes.

10. (New) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises about 5 to about 35 percent olefins by weight based on the total weight of the desulfurized cracked-gasoline.

11. (New) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises less than about 25 ppmw total sulfur content, said sulfur content consisting essentially of thiophenes and benzothiophenes.

12. (New) Composition in accordance with claim 1 wherein said desulfurized cracked-gasoline comprises less than about 0.1 ppmw thiol compounds and less than about 0.1 ppmw tetrahydrothiophene compounds.

13. (New) A composition comprising desulfurized cracked-gasoline, wherein said desulfurized cracked-gasoline comprises aromatics in an amount in the range of from about 15 to about 40 weight percent, olefins in an amount in the range of from about 5 to about 35 weight percent, total sulfur compounds in an amount of less than about 25 ppmw, thiol compounds in an amount of less than about 1 ppmw, tetrahydrothiophene compounds in an amount of less than about 1 ppmw, and dihydrobenzothiophene compounds in an amount of less than about 1 ppmw.

14. (New) The composition according to claim 13 wherein said desulfurized cracked-gasoline comprises thiol compounds in an amount of less than about 0.5 ppmw, tetrahydrothiophene compounds in an amount of less than about 0.5 ppmw, and dihydrobenzothiophene compounds in an amount of less than about 0.7 ppmw.

15. (New) The composition according to claim 14 wherein said desulfurized cracked-gasoline comprises total sulfur compounds in an amount of less than about 10 ppmw.

16. (New) The composition according to claim 13 wherein said total sulfur compounds consist essentially of thiophenes and benzothiophenes.

17. (New) The composition according to claim 13 wherein said desulfurized cracked-gasoline has an average octane number as determined by (RON+MON)/2 of at least about 81.35.

18. (New) The composition according to claim 13 wherein said desulfurized cracked-gasoline is produced by desulfurizing a cracked-gasoline feed, wherein said desulfurizing is not carried out by hydrotreating.

19. (New) The composition according to claim 13 wherein the difference between the octane numbers of said desulfurized cracked-gasoline and said

cracked-gasoline feed is not less than 3.5, as determined by $\Delta(\text{RON}+\text{MON})/2$.

20. (New) The composition according to claim 13 wherein said cracked-gasoline feed comprises catalytically cracked gasoline.